AMENDMENTS TO THE CLAIMS

1. (Original) A method of manipulating particles comprising subjecting particles suspended in a liquid to a moving ultrasonic standing wave and to a varying electrical field capable of generating a dielectrophoretic force on the particles.

2. (Previously Presented) A method according to Claim 1 in which the moving ultrasonic standing wave and the varying electrical field are applied at different times.

3. (Previously Presented) A method according to Claim 1 or 2 in which a stationary ultrasonic wave is applied followed by the moving ultrasonic wave.

4. (Previously Presented) A method according to Claim 1 or 2 in which the moving ultrasonic wave is applied followed by a stationary ultrasonic standing wave.

5. (Previously Presented) A method according to Claim 2 in which the moving ultrasonic standing wave is applied initially to move the particles from a first liquid medium into a second liquid medium.

6. (Previously Presented) A method according to Claim 2 in which the ultrasonic wave is applied to move the particles into close proximity with an electrical field generating electrode array.

7. (Previously Presented) A method according to Claim 2 in which the ultrasonic wave is applied to move the particles to a center of the liquid medium.

8. (Previously Presented) A method according to Claim 1 in which the moving ultrasonic standing wave and the varying electrical field are applied simultaneously.

9. (Currently Amended) A method of manipulating particles comprising subjecting particles suspended in a liquid to a moving ultrasonic standing wave and to a varying electrical field capable of generating a dielectrophoretic force on the particles, wherein the moving ultrasonic standing wave and the varying electrical field are applied simultaneously, and further ~~A method according to Claim 8 for separating two types of particles~~ comprising applying the moving ultrasonic standing wave so as to move both types of particles across an electrode array, and applying to the electrode array an electrical signal at such a frequency that one type of particle experiences a strong negative DEP force and is diverted into one region of the electrode array while the second type of particle experiences a weak negative DEP force and is relatively unaffected as the second type of particle is moved across the array.

10. (Previously Presented) A method according to Claim 1 further comprising application of fluid flow to assist in

manipulation of the particles.

11. (Original) A method of manipulating particles comprising subjecting particles suspended in a liquid to an ultrasonic vibration and to a varying electrical field capable of generating a dielectrophoretic force on the particles, the ultrasonic vibration and the varying electrical field being of different frequencies.

12. (Canceled)

13. (Currently Amended) Apparatus for treating particles suspended in a liquid comprising a chamber, means for feeding suspended particles into and out of the chamber, an electrode array on at least one wall of the chamber, means for applying to the electrode array an alternating electrical potential whereby to generate in suspended particles adjacent to the array a ~~highly~~ non-uniform alternating electric field so as to induce a dielectrophoretic force, and means for subjecting the liquid in the chamber to a moving ultrasonic standing wave.

14. (Currently Amended) ~~Apparatus according to Claim 13 in which~~ Apparatus for treating particles suspended in a liquid comprising a chamber, means for feeding suspended particles into and out of the chamber, an electrode array on at least one wall of the chamber, means for applying to the electrode array an alternating electrical potential whereby to

generate in suspended particles adjacent to the array a non-uniform alternating electric field so as to induce a dielectrophoretic force, and means for subjecting the liquid in the chamber to a moving ultrasonic standing wave, and wherein the chamber is a rectangular separation chamber, there being a pair of ultrasonic transducers arranged one at each end thereof, and in which the means for feeding suspended particles into the separation chamber comprises an input chamber mounted transversely to the separation chamber, the input chamber having a pair of ultrasonic transducers arranged one at each end.

15. (Previously Presented) Apparatus according to Claim 13 in which the chamber is a rectangular separation chamber, there being a pair of ultrasonic transducers arranged one at each end thereof, and in which the electrode array is an array of electrode pairs along each side of the chamber, whereby particles which are moved across the array by the moving standing ultrasonic wave and which experience a strong negative DEP force at the applied frequency are moved towards the center of the chamber.